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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------------|---------------------|------------------|
| 10/804,870 | 03/19/2004 | Lev Uryevich Roberts-Haritonov | P/7209 | 7646 |

23334 7590 01/24/2005

FLEIT, KAIN, GIBBONS, GUTMAN, BONGINI
& BIANCO P.L.
ONE BOCA COMMERCE CENTER
551 NORTHWEST 77TH STREET, SUITE 111
BOCA RATON, FL 33487

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| EXAMINER |
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PATEL, VISHAL A

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| ART UNIT | PAPER NUMBER |
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3676

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|-------------------------------------|--------------------------------------|---|--|
| <p>Office Action Summary</p> | Application No. 10/804,870 | Applicant(s) ROBERTS-HARITONOV ET AL. | |
| | Examiner Vishal Patel | Art Unit 3676 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/4/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17, line 2, "second sealing stage", should be changed to --the second sealing stage--.

Claim 18, line 4, "first second", should be changed to --first--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 5-6, 7-8, 11-12, 13-14, 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Uth (US. 6,494,460).

Regarding claims 1-2, 5-6, 7-8, 11-12, 13-14 and 17-18: Uth discloses a rotary machine having a tandem gas seal assembly between a rotor and a casing of the rotary machine (invention

Art Unit: 3676

of Uth). The tandem gas seal assembly comprising a first sealing stage and a second sealing stage, where each of the first sealing stage (first sealing stage having 20 and 24) and the second stage (second sealing stage having the other of 20 and 24) are mounted axially adjacent to one another on a machine rotor (rotor 12). The first sealing stage and the second sealing stage are totally separable from one another. The first sealing stage and the second sealing stage are capable of functioning as a seal when separated from each other (this is the case since both stages are totally separable).

The first sealing stage and the second sealing stage having mating formations (end of 34 and end of 36 that are adjacent to each other) to maintain each stage in axial alignment with one another. The first sealing stage is dynamically balanced separately from the second sealing stage (this is the case since both stages are totally separable). The first sealing stage and the second sealing stage are directly abut one another and are retained on the rotor by means of a lock nut (lock nut 38) applying an axial force to only an outer of the first sealing stage and the second sealing stage (the nut is applied on only one of the first sealing stage and the second sealing stage).

5. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gardner (US. 5,039,113).

Gardner discloses a rotary machine having a tandem gas seal assembly between a rotor and a casing of the rotary machine (invention of Gardner, figure 11 attached). The tandem gas seal assembly comprising a first sealing stage and a second sealing stage, where each of the first sealing stage (first sealing stage as showed in figure 11) and the second stage (second sealing stage having showed in attached figure) are mounted axially adjacent to one another on a

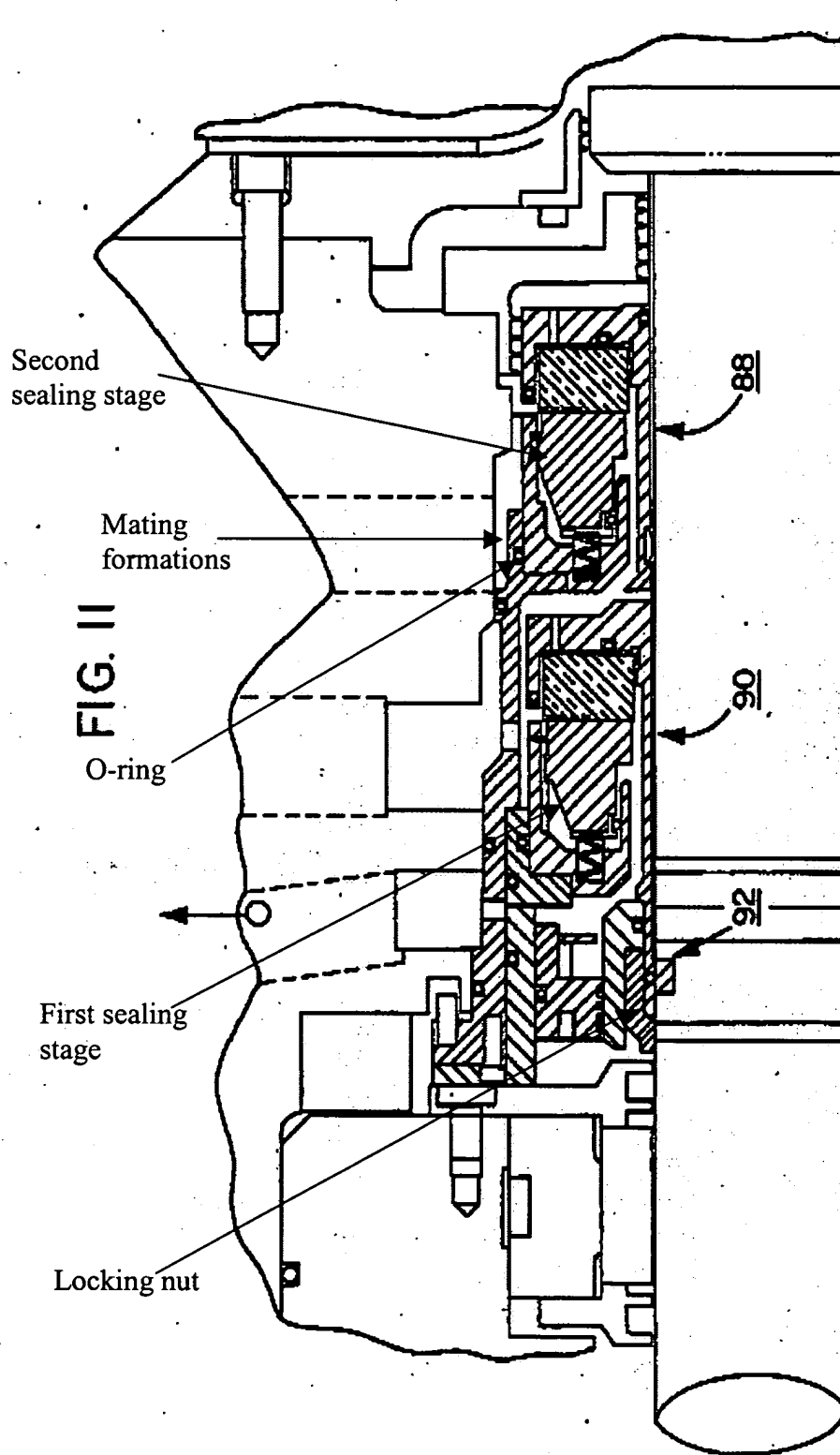
Art Unit: 3676

machine rotor (shaft where a locking nut is mounted). The first sealing stage and the second sealing stage are totally separable from one another. The first sealing stage and the second sealing stage are capable of functioning as a seal when separated from each other (this is the case since both stages are totally separable).

The tandem seal assembly further comprising mating formations (mating formations as showed in figure 11) to maintain each stage in axial alignment with one another. The mating formations include an annular collar projecting axially from an axial end of the first stage of the two sealing stages (collar of the first sealing stage going on a cylindrical end region of the second sealing stage) and the annular collar fitting over a cylindrical end region of the second sealing stage of the two sealing stage. Means (o-ring) for effecting a gas tight seal between the mating formations of the two sealing stages.

The first sealing stage is dynamically balanced separately from the second sealing stage (this is the case since both stages are totally separable). The first sealing stage and the second sealing stage are directly abut one another and are retained on the rotor by means of a lock nut (lock nut 38) applying an axial force to only an outer of the first sealing stage and the second sealing stage (the nut is applied on only one of the first sealing stage and the second sealing stage).

Art Unit: 3676



Art Unit: 3676

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Boster and Cherny teach that a shaft sleeve is made of two pieces, one overlapping the other of the two pieces to form an interconnection between the two pieces and means to seal the two pieces. Takahashi teaches a tandem seal assembly similar to applicants' invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is (703) 308-8495. The examiner can normally be reached on Monday through Friday from 7:30 PM to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford, can be reached on (703) 308-2978.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168. Technology Center 3600 Customer Service is available at 703-308-1113. General Customer Service numbers are at 800-786-9199 or 703-308-9000. Fax Customer Service is available at 703-872-9325.


Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: 703-872-9326, for formal communications for entry before Final action: or,
703-872-9327, for formal communications for entry after Final action.

Hand-delivered responses should be brought to Crystal Park Five, 2451 Crystal Drive, Arlington, Virginia, Seventh Floor (Receptionist suite adjacent to the elevator lobby).

VP
January 11, 2005


ALISON PICKARD
Primary Patent Examiner
Tech. Center 3600